

Remarks/Arguments:

Claims 1-22 are pending in the application. The applicant hereby affirms the election of claims 1-18 for examination and the withdrawal of claims 19-22 from consideration. New claims 23-25 are added herewith.

As a general observation, the applicant notes that the references cited in the Office action fail, either separately or in combination, to provide a fluidized bed that is cyclically pulsed as recited in amended claim 1, nor do they provide a fluidized bed in which two sources of gas are attached to the plenum as recited in claim 8. Details of these deficiencies, with reference to the specific rejections, are provided below.

Rejections under 35 U.S.C. § 102

Claims 1 and 2 stand rejected under 35 U.S.C. § 102(b) as anticipated by Gillette (U.S. 5,242,718). The office action asserts that Gillette discloses an apparatus for coating an article by immersion of the article in a fluidized powder, as presently claimed. This is not correct. Rather, Gillette teaches an apparatus that requires that the article to be coated (for example, the inside of a tank 130) is lowered over and around, not into, the apparatus. See column 5 lines 46-60.) Gillette's apparatus is not taught to be suitable for coating by immersing an article into the fluidized powder, and this claim element is therefore not met. Thus Gillette does not anticipate claim 1 or 2.

For purposes of clarity, claim 1 is amended herewith to state that the apparatus comprises a control system for controlling the valve to deliver cyclical pulses of the compressed air to the plenum. Support for the amendment is found in original claim 10, and throughout the specification. Gillette does not disclose a control system for controlling a valve to deliver cyclical pulses of compressed air to a plenum, but instead merely discloses "suitable valves and other control devices." It appears from the context of Gillette that this refers to a simple on/off valve, and in any case there is no teaching or suggestion of the valve being pulsed. Thus Gillette does not teach all of the claim limitations of amended claim 1 and therefore cannot anticipate this claim, and the rejection of claim 1 and dependent claim 2 should be withdrawn.

Claims 1, 2, 6, 8-11 stand rejected under 35 U.S.C. § 102(b) as anticipated by Luy (U.S. 5,766,557). As a preliminary matter, the office action incorrectly identifies Luy's item 28b as a plenum that is analogous to that of the present invention. The Office cites Luy at column 4 lines 51-60. However, in that passage item 28a is described by Luy as a "gas distribution space" and is located below the perforated bottom 21. Thus, it is analogous to the plenum of the present invention. Item 28b is not analogous to the plenum recited in instant claim 1, which is an empty chamber from which gas flows through a perforated plate into a coating chamber. The coating chamber, in use, contains a fluidized volume of coating powder. Luy's item 28b, which he refers to as a "fluidizing and process space," is analogous to the "coating chamber" of the present invention. See Luy column 10 line 55 through column 11 line 2. As stated there, air from gas inlet 29 passes into gas distribution space 28a, though the perforated bottom 21 and into the fluidizing and process space 28b. Thus Luy's 28a and 28b are most nearly analogous to the presently claimed plenum and coating chamber, respectively.

As a further clarification regarding the various gas sources in Luy, the applicant recounts the following from Luy at column 8, lines 64-66:

"The compressed air inlet 123 is connected to the connections 83, 89, 94, 96 of the hollow seals, for example via lines," Regarding the function of the hollow seals, the Abstract states that they are "...circular in cross-section in the relaxed state. Said seal can be deformed by a fluid under pressure which is passed into it, for example compressed air, in such a way that, at a first fluid pressure value, it connects the two wall parts tightly to one another and at the same time tightly to the perforated bottom and that, at a second, lower fluid pressure value, it still connects the two wall parts tightly to one another but is separated from the perforated bottom by annular gap, so that said perforated bottom can be swivelled."

Thus, the various lines branching from air inlet 123 actuate hollow seals, but do not pass into gas distribution space 28a, the feature that is most nearly analogous to the presently recited plenum.

Now regarding claim 1 and dependent claims 2 and 6, the applicant notes that there is no teaching that the air entering from gas inlet 29 is pulsed, and thus this element of the claims is not taught. Therefore the claims are not anticipated, and the rejection should be withdrawn.

Regarding claim 8 and dependent claims 9-11, the applicant notes that no source of gas other than gas inlet 29 enters gas distribution space 28a, which is most nearly analogous to the presently recited plenum. Thus, these claims are not anticipated because they recite first and second portions of the gas supply connected to the plenum, and Luy does not provide first and second portions so connected. Thus Luy does not teach all of the claim limitations of claims 1, 2, 6, 8-11 and therefore cannot anticipate these claims, and the rejection should be withdrawn.

Rejections under 35 U.S.C. § 103

Claims 2, 3, 6, and 8-14 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Gillette as applied to claims 1 and 2 above, and further in view of Blakeslee (U.S. 3,918,401).

Regarding claims 2, 3, and 6, the applicant notes that neither Gillette nor Blakeslee teaches the presently claimed feature of a gas supply system connected to a plenum adjoining a perforated plate, comprising a control system for controlling the valve to deliver cyclical pulses of the compressed air to the plenum. As noted above, Gillette does not teach pulsing of air into a plenum adjoining a perforated plate, and Blakeslee, who discloses a powder spray system, does not remedy this deficiency. Specifically, neither of Blakeslee's air inlet solenoid valves 19 and 21 enters a plenum adjoining a perforated plate as presently claimed. Rather, as shown in the Figure and described in column 3 at lines 33-38, valve 19 feeds directly to a chamber containing fluidized particles and valve 21 feeds into a spray aspirator.

Further, as noted above, Gillette does not disclose an apparatus in which an article can be immersed into a fluidized bed and Blakeslee fails to remedy this deficiency as well. Rather, as shown in the Figure, Blakeslee sprays powder in a sideways direction at an article (such as container 1) to be selectively coated (such as only the bottom of the container) with the powder. The article to be coated is outside the spray chamber. (See column 2 lines 13-15 and column 5 lines 50-52.) Thus the article is not immersed in a fluidized bed, and the combination of Gillette and Blakeslee does not teach this feature of the invention. Thus not all of the limitations of claims 2, 3 and 6 are taught or suggested by the combination of Gillette and Blakeslee, and a *prima facie* case of obviousness has not been presented. Accordingly, the rejection should be withdrawn.

Regarding claim 8 and dependent claims 9-14, neither Gillette nor Blakeslee discloses an apparatus in which an article can be immersed into a fluidized bed, as claimed. This is explained above. Thus the combination of Gillette and Blakeslee does not teach this feature of the invention, and a *prima facie* case of obviousness over Gillette and Blakeslee has not been presented.

Further, neither Gillette nor Blakeslee discloses the claim feature of a gas supply system comprising first and second portions, both connected to a plenum adjoining a perforated plate. Gillette does not disclose two portions, only one. Blakeslee's two air sources are attached to two different spots in his sprayer apparatus, as discussed above, and neither of these is a plenum adjoining a perforated plate. Thus the combination of Gillette and Blakeslee fails to teach this feature of the invention. Even if this feature had been provided by Blakeslee, there would still be no motivation to modify Gillette to use two air sources because Blakeslee's teachings are all related to operating a spray apparatus, not a fluidized bed into which parts are to be immersed. For both of these reasons, a *prima facie* case of obviousness over Gillette and Blakeslee has not been presented.

Claims 4, 5, 17 and 18 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Gillette and Blakeslee as applied to claims 2 and 3 above, and further in view of Ganiaris (U.S. 3,888,423). The office action relies on Ganiaris to provide the feature of using a blower as an air source. However, Ganiaris does not remedy the deficiencies of Gillette and Blakeslee as outlined above, and thus not all of the claim elements are taught by the combination of Gillette, Blakeslee, and Ganiaris, and a *prima facie* case of obviousness has not been presented.

Claims 7, 15 and 16 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Gillette and Blakeslee as applied to claims 6 and 12 above, and further in view of Gimben (U.S. 5,454,256). The office action relies on Gimben to provide the feature of using a limit switch. However, Gimben does not remedy the deficiencies of Gillette and Blakeslee as outlined above, and thus not all of the claim elements are taught by the combination of Gillette, Blakeslee, and Gimben, and a *prima facie* case of obviousness has not been presented.

Other Amendments

Claim 3 is amended to incorporate elements of original claim 14. Claim 4 is amended to state that the blower may be attached to the plenum either directly or via the same inlet as the controllable supply portion, as supported at [0029] in the application. Claim 7 now incorporates elements from original claim 16. Amended claim 16 recites that the two solenoid valves are in parallel, as shown in FIG. 7. Claim 17 is amended to change dependency. Claim 23 is supported by originally filed claim 4, and claims 24 and 25 are supported at line 1 of page 8 of the application. Several other amendments have been made for clarity. No new matter has been added.

Conclusion

In sum, the applicant submits that the references cited in the Office action fail, either separately or in combination, to provide a fluidized bed that is cyclically pulsed as recited in amended claim 1 and its dependents, nor do they provide a fluidized bed in which two sources of gas are attached to the plenum as recited in amended claim 8 and its dependents. Accordingly, the applicant submits that all of the rejections have been overcome, and respectfully requests reconsideration and allowance of the claims. The applicant invites the

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Examiner to contact his undersigned representative, Frank Tise, if it appears that such contact may expedite examination of this application.

Respectfully submitted,



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Attachments:

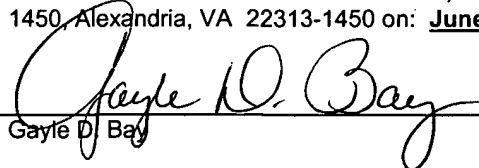
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Gayle D. Bay